

REMARKS

Enclosed herewith is a Substitute Specification in which the specification as filed has been amended in various places to correct typographical and grammatical errors, and to also add section headings.

In support of the above, enclosed herewith is a copy of the specification as filed marked up with the above changes.

The undersigned attorney asserts that no new matter has been incorporated into the Substitute Specification.

The claims have been amended to more clearly define the invention as disclosed in the written description. In particular, claim 3 has been cancelled, while claim 1 has been amended to include the limitations of cancelled claim 3. In addition, the claims have been amended for clarity.

The Examiner has objected to the spelling of "focussing" both in the specification and claims. Applicant submits that this spelling is indeed correct in that, as shown in Webster's New Collegiate Dictionary, 1979, "focussing" is an acceptable alternative spelling to "focusing" (see enclosed).

The Examiner has rejected claims 1-6 and 8 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,669,073 to Wakabayashi et al. The Examiner has further rejected claim 7 under 35 U.S.C. 103(a) as being unpatentable over Wakabayashi et al.

The Wakabayashi et al. patent discloses an optical disk drive apparatus which includes a swing arm carrying a focussing lens for focussing a light beam to scan an optical disk mounted on a spindle of a spindle motor.

The subject invention also relates to an optical disc apparatus having a swing arm carrying a focussing lens for focussing a light beam to scan an optical disc mounted on a spindle of a spindle motor.

According to MPEP § 2131, "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Further, "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The Examiner has indicated that Wakabayashi et al. discloses the elements of claims 1 and 3, and refers to col. 3, line 59 to col. 4, line 4.

Claim 1 claims, in part:

"...the optical lens assembly comprises, near said free end of the arm assembly, a perpendicularly-reflecting optical element connected to the focussing lens, said perpendicularly-reflecting optical element having a reflective surface facing a side of the focussing lens situated away from the information surface of the optical disc, when supported by the spindle, and

causing reflection of a laser beam travelling in a general direction between the swing axis and the focussing axis so as to travel through the focussing lens generally along the focussing axis..."

Applicant believes that this is neither shown nor suggested by Wakabayashi et al. In particular, as shown in Fig. 1, and described in Wakabayashi et al., the light beam is directed along a stick-shaped prism 35 which is fixed in cantilever fashion to the rotary attachment 34. The end of the stick-shaped prism 35 is fashioned such that the light beam carried therein is perpendicularly directed through the focussing lens 38 which is connected, not to the end of the stick-shaped prism 35, to an attachment member 37 which is connected to the rotary attachment 34 by two parallel elastic plates 36a and 36b. As such, the perpendicularly-reflecting optical element of Wakabayashi et al. (i.e., the end of the stick-shaped prism 35) is not attached to the focussing lens as in the present invention.

Applicant submits that this difference is not trivial in that the swing arm assembly of the subject invention takes up considerably less space than the prior art, allowing for use of the subject invention in ever smaller information technology and communications devices.

Claim 4 states:

"...the swing arm assembly is bounded by spaced virtual parallel flat planes extending perpendicularly to the swing axis, a first plane being nearer to the optical

disc, when supported by the spindle, and a second plane being more remote from said optical disc;

at least a portion of the reflecting element is inwardly spaced from said second plane thereby forming an intermediate space between the perpendicularly-reflecting optical element and said second plane; and

the stationary magnetic focussing means extends into said intermediate space between the perpendicularly-reflecting optical element and said second plane, thus occupying at least a portion of said intermediate space."

The Examiner has indicated that this limitation is met by Wakabayashi et al. and states"

"...at least a portion of the reflecting element (35) is inwardly spaced from said second plane, so that an intermediate space is provided between the reflecting element and said second plane; and the stationary magnetic focussing means extend into said intermediate space between the reflecting element and said second plane, thus occupying at least a portion of said intermediate space. (Although the focusing coil of element 39 is what really occupies the intermediate space, it serves the same purpose as the stationary focusing means.)".

Applicant submits that the Examiner is mistaken. The focusing coil of element 39 is actually equivalent to the movable magnetic focussing means of the subject invention which cooperates with the stationary magnetic focussing means through an air gap. The magnetic yokes 40a, 40b, permanent magnetics 41a, 41b, and magnetic yoke 42 are equivalent to the stationary magnetic focussing means of the subject invention. It should be noted that Wakabayashi et al. specifically states, at col. 3, lines 46-53:

"The focusing coil 39 is inserted into an air gap 44 formed by a focusing magnetic circuit consisting of magnetic yokes 40a, 40b, permanent magnets 41a, 41b and

a magnetic yoke 42. A focusing actuator 43 is comprised of the focusing coil 39, which is movable, and the focusing magnetic circuit mentioned above, which is fixed on the chassis 32."

Hence, the stationary magnetic focussing means, i.e., the focusing magnetic circuit of Wakabayashi et al. does not even partially enter the intermediate space formed between the "perpendicularly-reflecting optical element and said second plane".

Claim 7 states:

"the reflecting surface of the perpendicularly-reflecting optical element in the focussing lens assembly is disposed in an inclined plane relative to the swing axis of the swing arm assembly;

said movable electrical magnetic coil means is disposed generally in an inclined plane parallel to the reflecting surface; and

said stationary magnetic circuit means comprises an inclined face directed towards said movable electrical magnetic coil means, such that the said intermediate air gap between said movable electrical magnetic coil means and said stationary magnetic circuit means is disposed in an inclined plane generally parallel to said inclined reflective surface of the perpendicularly-reflecting optical element in the focussing lens assembly."

The Examiner has indicated that this is, in general, taught by Wakabayashi et al., but also adds:

"Wakabayashi et al. does not teach 'said movable electrical magnetic coil means are disposed generally in an inclined plane; and said stationary magnetic circuit means comprise an inclined face such that the said air gap between said movable electrical magnetic coil means and said stationary magnetic circuit means is disposed in an inclined plane.' It would have been obvious to one of ordinary skill in the art at the time of the invention to have the magnetic coil and circuit to be on an inclined plane in order to be parallel to the reflecting surface. The benefits of having the

magnetic coil and circuit be parallel to the reflecting surface are similar to the first embodiment of the invention in that it creates high stability even under extreme movement by the swing arm assembly (column 4, lines 28-35; Wakabayashi)."

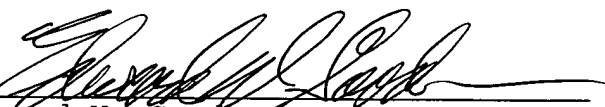
Applicant submits that it should be clear from the above that the Examiner has missed the point of the subject invention as well as Wakabayashi et al. In particular, since the perpendicularly-reflecting optical element of Wakabayashi et al. is part of the stick-shaped prism and does not move vertically with the focussing lens, there is no incentive for the magnetic coil to be positioned in an inclined plane, nor for the magnetic circuit to have an inclined face directed toward the magnetic coil. Applicant has read the identified section of Wakabayashi et al. and there is no disclosure of how an inclined surface has helped the stability of the movement of the swing arm by the rotary actuator.

In the subject invention, since the perpendicularly-reflecting optical element is connected to the focussing lens, the movable magnetic focussing means may then be mounted on a back surface of the perpendicularly-reflecting optical element parallel to the plane of the reflecting surface, and then the stationary magnetic focussing means may be formed with a corresponding inclined surface. Hence, the height of the overall structure is much less than that attainable by Wakabayashi et al.

In view of the above, Applicant believes that the subject invention, as claimed, is neither anticipated nor rendered obvious by the prior art, and as such, is patentable thereover.

Applicant believes that this application, containing claims 1, 2 and 4-8, is now in condition for allowance and such action is respectfully requested.

Respectfully submitted,

by 
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